

ABSTRACT OF THE INVENTION

A method for locating a user in a wireless network is disclosed. A mobile computer seeking to determine its location within a building detects the signal strength of one or more wireless base stations placed at known locations throughout the building.

5      The mobile computer uses this measured signal strength to determine its location via a signal-strength-to-location table look-up. A table of known locations within the building and the base station signal strength at those locations is searched to find the most similar stored signal strength to the signal strength detected. The location corresponding to the most similar stored signal strength is determined to be the current location of the mobile

10     computer. Alternatively, a number of signal strengths from the table can be used and the corresponding locations can be spatially averaged to determine the location of the mobile computer. The table can be derived empirically, by placing a mobile computer at the known locations and detecting the signal strength of the wireless base stations at those locations, or the table can be derived mathematically by taking into account a reference

15     signal strength, the distance between the reference point and the known location, and the number of walls between the reference point and the known location. As an alternative, the base stations can detect the signal strength of the mobile computer. In such a case, the table would relate a known position of the mobile computer to the signal strength of the mobile computer at that location as detected by the one or more base stations.